

Diagnostic Imaging in Body Packers

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Drug abuse is a major health problem in Iran, particularly in youth and young adults.¹ Body packing of opium is a common cause of admission to the medical toxicology ward. Because body packers are drug smugglers, they are usually brought to the hospital by police, are asymptomatic, and deny body

packing. Ultrasonography, plain radiography, and computed tomography (CT) are recommended diagnostic modalities.² We present 3 images in a case of massive body packing (Figures 1-3). A 50-year-old woman ingested 200 pellets of packed opium (Taryak) to transport them from Zahedan to Mashhad for the equivalent of US

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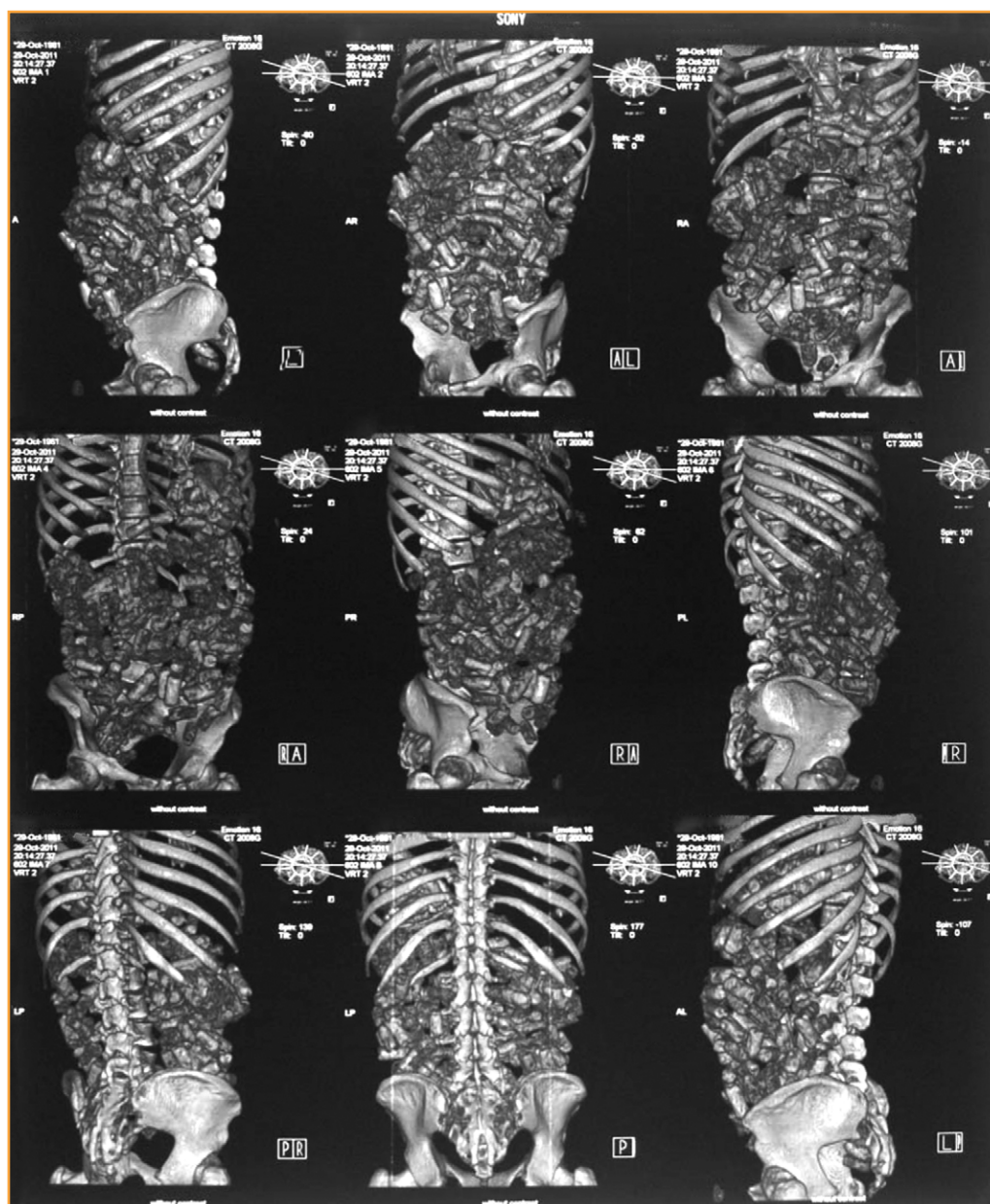


FIGURE 1. CT 3D reconstruction of the abdomen and pelvis showed numerous packets of opium in the entire gastrointestinal system.

\$200. She was arrested by police in Birjand for suspected body packing of drugs. She confessed to ingestion of about 200 pellets of opium for a total of 2.8 kg.

Because of the massive amount of drugs in her gastrointestinal system, she was referred by law enforcement to the emergency department of Vali Asr Hospital in Birjand (the main and referral hospital for poisoning cases in southern Khorasan).³ At admission, she was confused, and because of suspected opium poisoning, she received 0.8 mg of naloxone, which restored her mental status to normal. Pupil examination results were normal, but slight abdominal distention was found on her physical examination.

Axial CT scans (window level of +40 and window width of 300) obtained without bowel preparation or oral or intravenous administration of contrast agent including sagittal and coronal reconstructions and 3-dimensional surface rendered images revealing a distended stomach and bowel loops loaded with numerous drug-filled packets measuring approximately 3.5 to 4 cm. Ingested drug packets appeared almost uniform in shape and were cylindrical. The number of packages was reported to be as high as 200, but it was difficult to determine the exact number. Although the stomach and bowel loops were distended, no abrupt termination of distention (cutoff sign) suggestive of mechanical obstruction was observed. No obvious leaking from the packages was seen. Plain abdominal radiographs of the abdomen (anteroposterior and lateral views) taken at the time of admission showed the stomach and bowel were entirely loaded with numerous drug packets that had density similar to soft tissue. The most useful finding in these radiographs was a thin, lucent rim of air in a cylindrical pattern caused by air trapped between the wrapping and the drug substance in each package or by a rim of air between layers of wrapping (so-called double condom sign).



FIGURE 3. Radiographic findings in a body packer. A plain abdominal radiograph shows multiple foreign bodies. The “double-condom” sign (arrows) outlines many packets.

We administered a polyethylene glycol–electrolyte lavage solution to the patient at a rate of 2 L/h for 12 hours. The plain abdominal radiograph of the abdomen 24 hours later showed a decreased number of packets in the stomach, but numerous packets were still visible in all parts of the colon. Because of the high number of retained pellets, we continued the polyethylene glycol–electrolyte lavage solution for an additional 8 hours. On CT scanning and radiography 48 hours later, the abdomen appeared to be clear of drug packets. Customs agents collected 207 intact pellets of opium. Repeated imaging confirmed complete decontamination.

This case demonstrates the appearance of multiple drug packets using different imaging modalities and the importance of serial imaging in diagnosing and treating patients who are body packing. Although abdominal radiography and ultrasonography are useful screening tools, CT appears to be more effective in the evaluation and management of patients.

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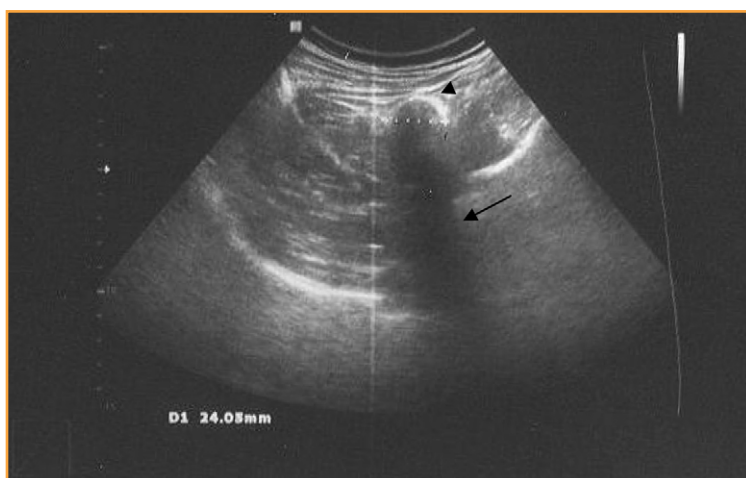


FIGURE 2. Abdominal ultrasound of a body packer. Round hyperechoic structures with dorsal echo extinction are seen within the abdomen. Curvilinear hyperechoic rim (arrowheads) and acoustic shadowing (arrow) are visible.